



UPSKILLING AND RESKILLING  
IN THE UAE:  
**FUTURE-PROOFING  
CAREERS WITH AI SKILLS**



The rapid evolution of technology, particularly in artificial intelligence (AI), is fundamentally transforming the global job market. This technological revolution is reshaping industries, creating new opportunities, and potentially rendering certain job roles obsolete. For the United Arab Emirates (UAE), a nation striving to position itself as a global hub for innovation and technology, this transformation presents both challenges and opportunities.

President Sheikh Mohamed recently urged educators to focus on promoting the responsible use of AI and technology in their classrooms. On 24<sup>th</sup> January 2025, the International Day of Education, he said, "By fostering lifelong learning, promoting our values and identity, and leveraging the responsible use of AI and technology, we aim to build a stronger, more innovative future for our nation and our people."

In a newly published [paper](#) in the Journal of Adult and Continuing Education the authors, led by Dr. David Santandreu Calonge, Mohamed bin Zayed University of Artificial Intelligence, examine the imperative of equipping the UAE workforce with AI skills to navigate the dynamic demands of the contemporary job landscape. By analysing the vulnerabilities of existing job roles and industries to technological disruptions, the paper highlights the urgency of adopting upskilling and reskilling initiatives and draws insights from global good practices to inform effective implementation strategies.

## INTRODUCTION

The rapid evolution of technology, particularly in artificial intelligence (AI), is fundamentally transforming the global job market. This technological revolution is reshaping industries, creating new opportunities, and potentially rendering certain job roles obsolete. For the United Arab Emirates (UAE), a nation striving to position itself as a global hub for innovation and technology, this transformation presents both challenges and opportunities. This article examines the imperative of equipping the UAE workforce with AI skills to navigate the dynamic demands of the contemporary job landscape. By analysing the vulnerabilities of existing job roles and industries to technological disruptions, the paper highlights the urgency of adopting upskilling and reskilling initiatives and draws insights from global good practices to inform effective implementation strategies.

## CONTEXT AND BACKGROUND

The UAE has emerged as a regional leader in embracing technological advancements and digital transformation. With a strong emphasis on innovation, the country has invested heavily in AI, blockchain, and other emerging technologies as part of its broader economic diversification strategy. However, the rapid pace of technological change poses significant challenges for the workforce. Many traditional job roles are becoming automated, and industries such as manufacturing, retail, and even finance are experiencing disruptions due to AI and machine learning technologies.

The UAE's workforce is particularly vulnerable to these disruptions due to its reliance on expatriate labour and the prevalence of roles that are susceptible to automation. For instance, routine and repetitive tasks in sectors like construction, logistics, and administration are increasingly being performed by AI-driven systems. This shift necessitates a proactive approach to upskilling and reskilling to ensure that the workforce remains relevant and competitive in the face of technological advancements. A proactive approach is already being seen in schools with AI education being incorporated into curriculums.

Moreover, the global context of upskilling initiatives provides valuable lessons for the UAE. Countries like Singapore, South Korea, and Germany have implemented comprehensive national strategies to equip their workforces with future-ready skills. These initiatives emphasize the importance of lifelong learning, public-private partnerships, and targeted training programs in addressing skills gaps. By examining these global examples, the UAE can develop a tailored approach to upskilling and reskilling that aligns with its unique economic and demographic context.

## KEY FINDINGS

The article identifies several key findings related to the state of the UAE workforce and the imperative of upskilling and reskilling. The following five themes emerged from the data:

### 1. Operational Efficiency, Challenges, Disruption, and Limitations Associated with AI Adoption in Different Sectors:

- **Oil and Gas:** AI adoption in this sector has led to significant improvements in operational efficiency, such as predictive maintenance and optimized resource allocation. However, challenges include high implementation costs, data privacy concerns, and resistance to change among workers.
- **Finance and Banking:** AI has transformed customer service, fraud detection, and risk management. Yet, limitations such as algorithmic bias and regulatory hurdles pose significant challenges.
- **Retail and eCommerce:** AI-driven personalization and inventory management have enhanced customer experiences. However, disruptions in traditional retail roles and the need for digital literacy among workers remain pressing issues.

## 2. Ethics, Human Resources, and Organizational Competitiveness:

- The ethical implications of AI, such as bias in decision-making and job displacement, are critical concerns. Organizations must balance technological advancement with ethical considerations to maintain public trust.
- Human resources (HR) departments play a pivotal role in facilitating upskilling and reskilling initiatives. However, a lack of expertise in AI and limited resources often hinder their effectiveness.
- Organizational competitiveness in the digital age depends on the ability to integrate AI technologies while fostering a culture of innovation and adaptability.

## 3. AI in Education, Student Development, Employability, and Higher Education:

- AI is transforming education by enabling personalised learning experiences and improving administrative efficiency. However, challenges such as unequal access to technology and the need for teacher training must be addressed.
- Higher education institutions are increasingly incorporating AI into their curricula to enhance student employability. Partnerships with industry stakeholders are essential for ensuring that graduates possess the skills demanded by the job market.

## 4. Transformation of Job Roles and Business Processes:

- AI is reshaping job roles across industries, with a growing demand for data scientists, AI specialists, and cybersecurity experts. At the same time, routine and manual roles are being phased out.
- Business processes are becoming more automated, leading to increased efficiency but also necessitating a shift in workforce skills. Employees must adapt to new technologies and workflows to remain relevant.

## 5. Digital Transformation and Right-Skilling:

- Digital transformation is a key driver of economic growth in the UAE. However, its success depends on the ability of the workforce to acquire the right skills.
- Right-skilling, or the process of aligning workforce skills with industry needs, is critical for ensuring that employees can contribute effectively to digital transformation efforts. This requires targeted training programs and a focus on both technical and transferrable skills.

## IMPLICATIONS

The findings of the article have significant implications for policymakers, educators, employers, and workers in the UAE:

1. **For Policymakers:** The UAE government must prioritize upskilling and reskilling as part of its national economic strategy. This includes investing in education and training programs, fostering public-private partnerships, and creating policies that incentivize lifelong learning.

2. **For Educators:** Educational institutions must adapt their curricula to meet the demands of the digital economy. This includes incorporating AI and data science into academic programs and offering flexible learning options for working professionals.
3. **For Employers:** Businesses must take an active role in upskilling their workforce. This can be achieved through on-the-job training, partnerships with educational institutions and training providers, and the adoption of AI technologies that complement human skills.
4. **For Workers:** Individuals must embrace a mindset of continuous learning and adaptability. By acquiring AI skills and staying informed about industry trends, workers can enhance their employability, career prospects and progression in the future.

## RECOMMENDATIONS

The paper offers several recommendations for addressing the skills gap and future-proofing careers in the UAE:

1. **Develop National Upskilling Initiatives:** The UAE should further implement and promote The National Employment Strategy 2031 for upskilling and reskilling, like Singapore's SkillsFuture initiative. This framework should provide funding, resources, and guidance for workers and employers. Microsoft's initiative to train one million UAE residents and 100,000 government employees in AI skills is a commendable step towards preparing the country's workforce for the future. However, to ensure the initiative's effectiveness, it is crucial to go beyond just skills training.
2. **Promote STEM Education:** Strengthening science, technology, engineering, and mathematics (STEM) education at all levels is essential for building a pipeline of talent in AI and related fields.
3. **Encourage Public-Private Collaboration:** Partnerships between the government, educational institutions, and private sector organizations are critical for designing and implementing effective training programs.
4. **Leverage Technology for Learning:** Online platforms, virtual reality, and other digital tools can make upskilling more accessible and engaging for workers.
5. **Focus on transferable Skills:** In addition to technical AI skills, workers must develop transferable skills such as critical thinking, creativity, and emotional intelligence, which are less susceptible to automation.

## CONCLUSION

The rapid evolution of technology, particularly AI, is reshaping the global job market and presenting both challenges and opportunities for the UAE. To future-proof its workforce, the UAE must prioritize upskilling and reskilling as a strategic imperative. By equipping workers with AI skills and fostering a culture of lifelong learning, the country can enhance its competitiveness, drive innovation, and ensure sustainable economic growth. Drawing on global good practices and fostering collaboration between stakeholders, the UAE can navigate the complexities of the digital age and build a resilient and future-ready workforce, ready to embrace the next digital evolution.

Link to the paper: <https://journals.sagepub.com/doi/10.1177/14779714251315288>

Santandreu Calonge, David, Firuz Kamalov, Pablo Medina Aguerrebere, Leisa Hassock, Linda Smail, Dima Yousef, Dimple R. Thadani, Theresa Kwong, and Nadia Abdulla. "Upskilling and reskilling in the United Arab Emirates: Future-proofing careers with AI skills." *Journal of Adult and Continuing Education* (2025): 14779714251315288.



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